

## NOVEL CO-STIMULATORY MOLECULES

### ABSTRACT

The invention provides polynucleotides and polypeptides encoded therefrom  
5 having advantageous properties, including an ability of the polypeptides to preferentially  
bind a CD28 or CTLA-4 receptor at a level greater or less than the ability of human B7-1 to  
bind CD28 or CTLA-4, or to induce or inhibit altered level of T cell proliferation response  
greater compared to that generated by human B7-1. The polypeptides and polynucleotides  
of the invention are useful in therapeutic and prophylactic treatment methods, gene therapy  
10 applications, and vaccines.